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**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee the  
Resource Adequacy Program, Consider  
Program Refinements, and Establish Forward  
Resource Adequacy Procurement Obligations.

R.19-11-009

**OPENING COMMENTS OF THE CALIFORNIA COMMUNITY CHOICE  
ASSOCIATION ON TRACK 2 PROPOSALS**

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Pursuant to the February 28, 2020, *Administrative Law Judge’s Ruling Modifying Track 2 Schedule*, the California Community Choice Association (“CalCCA”)<sup>1</sup> respectfully submits these comments on the Track 2 Resource Adequacy (“RA”) proposals submitted by the Energy Division Staff (“Staff”) and other parties on February 21, 2020, to address issues raised in the *Assigned Commissioner’s Scoping Memo and Ruling*.<sup>2</sup>

**I. INTRODUCTION**

CalCCA appreciates the opportunity to respond to the Track 2 proposals presented by Staff and other stakeholders. These comments address both proposals to modify RA qualifying capacity (“QC”) counting methodologies, and other near-term program refinements.

Assigning a reasonable RA QC value to all resources is the foundation for ensuring that California has sufficient resources to meet its reliability needs. Determining RA value, however, is an imprecise exercise with consequences to erring in either direction. Overvaluing RA could

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<sup>1</sup> California Community Choice Association represents the interests of 19 community choice electricity providers in California: Apple Valley Choice Energy, CleanPowerSF, Clean Power Alliance, Desert Community Energy, East Bay Community Energy, Lancaster Choice Energy, Marin Clean Energy, Monterey Bay Community Power, Peninsula Clean Energy, Pioneer Community Energy, Pico Rivera Innovative Municipal Energy, Rancho Mirage Energy Authority, Redwood Coast Energy Authority, San Jacinto Power, San Jose Clean Energy, Silicon Valley Clean Energy, Solana Energy Alliance, Sonoma Clean Power, and Valley Clean Energy.

<sup>2</sup> *Assigned Commissioner’s Scoping Memo and Ruling*, Jan. 22, 2020 (“Scoping Memo”).

degrade reliability, while undervaluing RA will lead to unnecessary investment and higher costs to customers. The Track 2 proposals all move in the direction of greater conservatism in counting RA QC than historical practices, assuring that the Commission's efforts will support increased reliability. While this may be directionally appropriate in light of tightening capacity markets, the Commission's challenge in this Track is to manage the negative implications of this conservative approach: increasing costs for customers and chilling the deployment of preferred resources.

CalCCA offers several recommendations in response to the reports produced by the Track 2 Working Groups. Specifically, CalCCA urges the Commission to take the following actions:

1. Adopt Southern California Edison Company's ("SCE's") proposal for counting the RA value for hybrid resources limited by Investment Tax Credit ("ITC") incentives;
2. Apply the revised hybrid resource counting methodology to all resources prospectively, including those resources procured in response to the Commission's procurement track order in the Integrated Resource Planning ("IRP") proceeding, Decision ("D.") 19-11-016;
3. Transition from the current average effective load carrying capability ("ELCC") methodology for solar and wind resources to a marginal methodology, while studying further the use of a marginal ELCC for battery storage resources;
4. Replace the load impact protocol ("LIP") for determining the RA value of demand response ("DR") resources with a less time- and resource-intensive methodology, recognizing the potential for the existing LIP methodology to create a barrier to critical battery storage resiliency projects; and
5. Adopt the Hydro Counting Working Group's proposal for establishing QCs for hydroelectric resources, recognizing that the methodology will reduce the stack of resources available to meet reliability needs, but rejecting any reflexive procurement directives in favor of a more studied approach in the IRP proceeding.

Collectively and directionally these changes will increase the effectiveness of the Commission's RA program in ensuring reliability.

CalCCA also supports adoption of other Track 2 proposals that will provide needed near-term refinement to the RA program. CalCCA urges the Commission to:

6. Expand the existing local RA waiver process to system and flexible RA, and adopt SCE's proposed waiver for providers of last resort;
7. Reject seasonal penalties, recognizing that they do not address the underlying issues of market power and scarcity;
8. Refine and clarify the Maximum Cumulative Capacity buckets proposal;
9. Align Commission and California Independent System Operator ("CAISO") reporting requirements for RA showings;
10. Defer multi-year forecasting for further exploration;
11. Make the methodology for allocating multi-year local RA requirements transparent to all LSEs; and
12. Reject changes to the planning reserve margin.

These changes will collectively increase the certainty that sufficient resources are being procured at the right time and in the right places to meet the state's reliability needs.

## **II. COUNTING METHODOLOGIES**

### **A. Hybrid Resources**

The Scoping Memo identified QC counting convention requirements for hybrid resources as a priority refinement to the RA program.<sup>3</sup> Today, hybrid resources with ITC charging restrictions are governed by the interim counting methodology adopted in D. 20-03-016 ("Interim Method").<sup>4</sup> Contrary to Staff's proposal to retain the methodology as permanent,

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<sup>3</sup> Scoping Memo at 6.

<sup>4</sup> The Interim Method applies only to hybrid resources subject to ITC charging restrictions, which require a substantial portion of the storage device's charging energy to come from the pair renewable resource. *Id.*, Ordering Paragraph 1 at 15. See 26 CFR §1.48-9(d)(6) (non-solar sources of energy do not exceed 25% of total annual input).

adopting a more balanced methodology that recognizes the value hybrid resources can offer to the grid is critical to signaling the need to develop these important preferred resources.

As an initial matter, CalCCA supports adoption of common definitions to enable an efficient discussion of hybrid issues. Further, CalCCA supports SCE's proposed replacement methodology for hybrid resources with ITC charging restrictions, which more realistically values the contribution of these resources to reliability.<sup>5</sup> Finally, CalCCA proposes application of the revised methodology to all hybrid resources developed in response to the IRP procurement track decision, D.19-11-016, to enable more accurate valuation of these preferred resources and avoid imposing unnecessary costs on customers.

### **1. Adopt the Working Group Definitions of Key Terms**

Agreeing on common definitions of terms is an important starting place in establishing a hybrid resource methodology. The Commission defines "hybrid resource" as "a generating resource co-located with a storage project and with a single point of interconnection."<sup>6</sup> Decision 20-03-016 establishes its counting rules, however, not based on whether a resource is a hybrid resource, but whether a resource is subject to ITC charging restrictions.<sup>7</sup> Further, D.20-03-016 does not define "co-located" resources.

The Hybrid Counting Working Group<sup>8</sup> proposes consensus definitions as follows:

- Hybrid: Two or more resources (one of which is a storage project) located at a single point of interconnection with a single resource ID.

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<sup>5</sup> *Southern California Edison Company's (U 338-E) Track 2 Proposals*, Feb. 21, 2020 ("SCE Track 2 Proposals") at 6-8.

<sup>6</sup> D.20-03-016, Ordering Paragraph 2 at 15.

<sup>7</sup> *Id.*

<sup>8</sup> *Hybrid Counting Working Group Report Submitted by San Diego Gas & Electric Company (U 902 E) and the California Energy Storage Alliance* ("Hybrid WG Report"), Mar. 11, 2020, at 9.

- Co-Located: Two or more resources (one of which is a storage project) located at a single point of interconnection with two or more resource IDs.

The WG Report then distinguishes resources in terms of economic incentives, identifying “ITC Limited” resources as those “economically incentivized to charge from the on-site renewable generation in order to receive federal ITCs.”<sup>9</sup> The WG Report definitions align with the definitions employed by the CAISO in its Hybrid Resource stakeholder process.<sup>10</sup> CalCCA supports these definitions as clear and widely accepted descriptions of the resources at issue.

## 2. **Adopt SCE’s Hybrid Counting Proposal for ITC-Limited Hybrid Resources**

Both the Commission<sup>11</sup> and the CAISO<sup>12</sup> acknowledge that the Interim Method is conservative. Deploying an approach that underestimates the reliability contributions of hybrid resources, at a time when the state needs new resource development to meet reliability needs, risks slowing that development, introduces uncertainty in the market, and sends the wrong investment signals to both developers and Load Serving Entities. Instead, the Commission should value the reliability contribution of resources correctly, sending accurate, stabilizing market signals and promoting the development of these preferred resources.

CalCCA agrees with the Solar Energy Industries Association (“SEIA”), the Large-Scale Solar Association (“LSA”), California Energy Storage Alliance (“CESA”), and other parties supporting an additive method for different configurations. Certain factors may limit a

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<sup>9</sup> *Id.* at 9-10.

<sup>10</sup> *See, e.g., Hybrid Resources Revised Straw Proposal*, Dec. 10, 2019, at 7-8.  
<http://www.caiso.com/InitiativeDocuments/RevisedStrawProposal-HybridResources.pdf>

<sup>11</sup> D.20-01-004, Finding of Fact 4 at 14.

<sup>12</sup> *California Independent System Operator Corporation Track 2 Proposals* (“CAISO Proposals”), February 21, at 7; <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M329/K233/329233760.PDF>



resource's actual QC, however, including the ratio of storage to generation and ITC limitations.

SCE presents a proposal to address a 100 percent on-site ITC-Limited scenario.

SCE expresses its hybrid methodology mathematically as follows:

$$\text{Solar plus Storage QC} = \text{Effective ES QC} + \text{Effective Solar QC}:$$

Where Effective ES QC is the minimum of:

1. The energy (MWh) production from the renewable resource until two (2) hours before the net peak load assuming charging is done at a rate less than or equal to the energy storage's capacity. This renewable charging energy is then divided by 4 hours to determine the QC; or
2. The QC of the energy storage facility.

And the Effective Solar QC is the remaining solar capacity, net of the capacity required to charge the battery (i.e., Effective ES QC), multiplied by the ELCC factor for the month.

SCE's proposal is a reasonable balance between the interim "greater of" and a "full additive" approach. Importantly, SCE's proposal accounts for the impact of charging on the renewable output and the battery's ability to charge from the renewable device, which addresses one of the fundamental concerns underpinning the Commission's conservative Interim Method. In this way, SCE's proposal reasonably recognizes the significant potential for hybrid and co-located resources<sup>13</sup> to provide reliability contributions.

The WG Report raises other non-consensus issues that require further discussion among stakeholders.<sup>14</sup> CalCCA supports continuing dialogue on these issues over time. With respect to behind-the-meter ("BTM") hybrid resources that are contracted to provide RA capacity, CalCCA supports, in principle, development of counting methodologies conferring consistent resource

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<sup>13</sup> "Co-located" resources include paired renewable and storage resources with more than one point of interconnection.

<sup>14</sup> *Id.* at 10-18.

value as in-front-of-the-meter (“IFOM”) resources, recognizing that further development of BTM market participation requirements necessary for equivalence with IFOM. CalCCA also supports continued discussion for the ITC-Limited charging case where less than 100 percent of the energy is from on-site charging.

### **3. The SCE Proposal is Robust to Variations in Weather, Geography, and Resource Configuration**

The amount of energy available at any time from a hybrid resource will be influenced by varying weather conditions, geography, Investment Tax Credit (“ITC”) charging restrictions, and the storage operator’s market participation strategy.<sup>15</sup> To serve their intended reliability role, these resources must manage these influences to achieve a full state of charge (“SOC”) from their paired generating resources prior to the RA assessment window without overreliance on charging from external power sources. While assessment of market participation strategies goes beyond the scope of the Commission’s inquiry, CalCCA has examined the interaction of weather, geography, and ITC charging restrictions in response to the proposals offered in this Track.

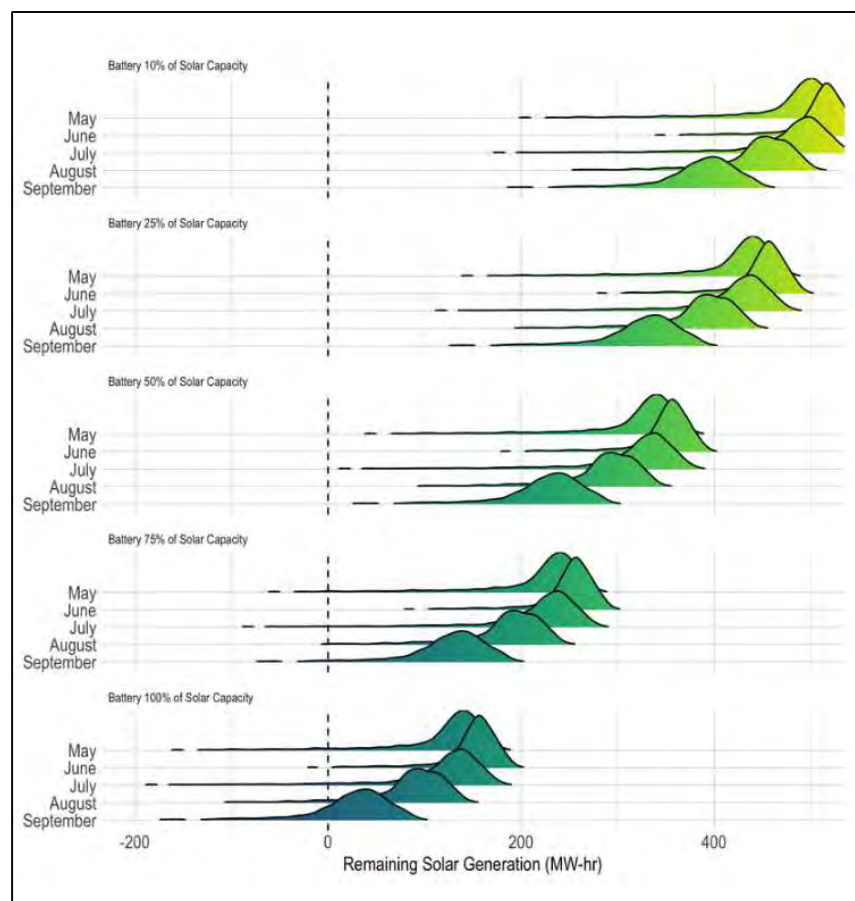
The analysis, described in greater detail in the Appendix, examines how weather, geography and ITC restrictions could impact energy availability for hybrid resources based on historical weather data (1998-2018 sub-hourly solar radiation) at several prominent solar resource locations within California (Mojave, Lancaster, Bakersfield, Carrizo Plain). The analysis compares the modeled solar generation against the energy needed to charge a battery from a zero SOC to full SOC prior to 4:00 p.m. strictly from on-site generation. The analysis demonstrates that the ITC charging restriction has a modest to negligible impact for battery

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<sup>15</sup> See, e.g., CAISO Proposals at 7-8.

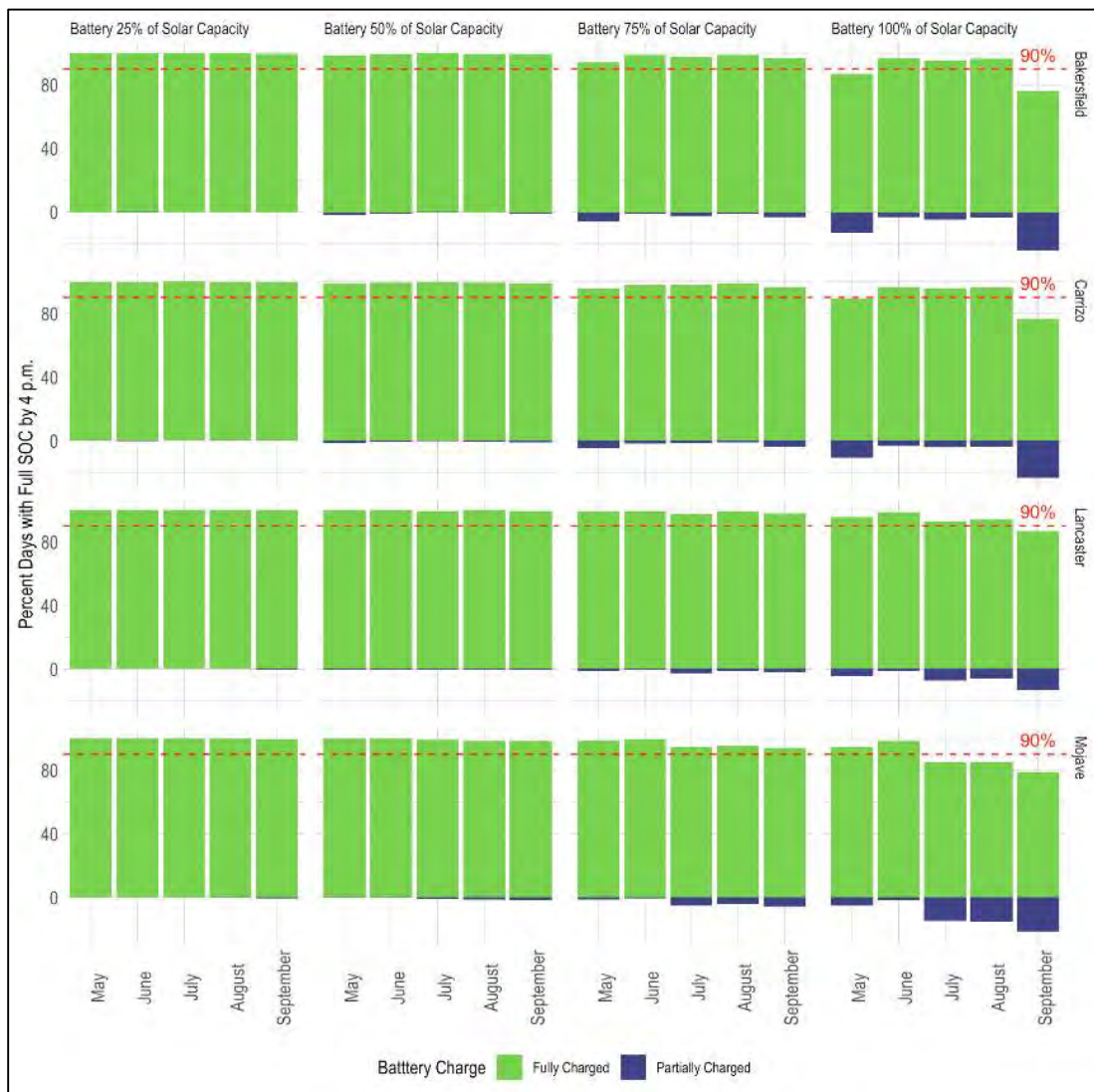
resources sized at or below 50% of the hybrid or collocated solar resource nameplate capacity (e.g. 5MW, 20MWh battery; 10MW solar PV). For storage resources up to 75% of the solar capacity, on-site charging alone is sufficient to reach a full SOC on over 80% of days, requiring only modest contributions from grid charging that would fall well within the 25% limit imposed by the ITC.

Figure 1 illustrates the excess solar generation relative to the quantity necessary to achieve a full SOC by 4pm in Lancaster, CA as a series of density functions, with each day representing one observation in the historical weather dataset.

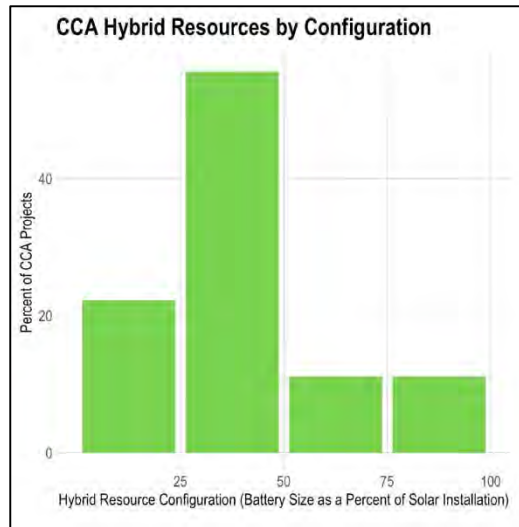


**Figure 1: Modeled Energy Production in Lancaster, CA, 1998-2018 (Density Functions)**

The analysis found that these results are consistent across prominent solar development regions within California. Figure 2 simplifies this analysis by illustrating the frequency of days achieving a full SOC across the sample locations. The dashed red line indicates a full SOC is achieved on 90% or more days within the sample.



**Figure 2: Summer Energy Production (1998-2018), Percent of Days Achieving Full State of Charge Strictly from On-Site Charging**



**Figure 3: Capacity Ratios for Hybrid / Co-Located Projects Under Development for CCA Off-takers**

To date, the majority of hybrid / co-located projects under contract with CCA off-takers have significantly less planned battery capacity than solar nameplate capacity. CalCCA expects this trend to continue and will mitigate concerns regarding configurations exceeding 75% capacity ratios which may not be consistently feasibly charged on-site.

#### **4. Apply the Revised Methodology to Procurement Track Investments**

The Commission concluded in D.20-01-004 that the Interim Method should apply for purposes of procurement track resource counting.<sup>16</sup> Recognizing that, by the Commission’s own acknowledgement, the Interim Method is conservative, CalCCA proposes that a revised methodology that more accurately values a hybrid resource’s contribution to reliability should be applied for purposes of D.19-11-016 procurement. Hybrid resources are among a very limited set of resources viable for use in meeting the new IRP Procurement Track compliance obligation. Undervaluing these resources will lead to over-investment at higher costs to customers.

<sup>16</sup> D.20-01-004 at 7.

Consequently, the Track 2 adopted methodology – assuming it is less conservative than the Interim Method – should be used to count resource value for LSEs’ compliance with the procurement track directives.

## **5. Reject Proposals to Rely on the Current Interim Method**

San Diego Gas & Electric Company (“SDG&E”) proposes to rely on the Interim Method until the Astrape Consulting ELCC study is completed in the Renewable Portfolio Standard (“RPS”) proceeding.<sup>17</sup> Staff goes further, proposing to retain the Interim Method permanently.<sup>18</sup> The Commission should reject both proposals.

The Interim Method is arguably the most conservative method available, by the Commission’s own acknowledgement and as demonstrated by the higher ELCCs that would be achieved by all other proposals. It is also the least reflective of the value these resources provide to the system. This overly conservative approach will understate the value of these preferred resource projects and could (1) discourage their development and/or (2) increase the price of the projects, which will then be borne by customers already facing increasing utility bills and mounting economic hardship. Neither result is desirable, and therefore a more moderate approach must be adopted, rejecting the Staff and SDG&E proposals to maintain the status quo.

While SDG&E’s status quo proposal only defers a permanent methodology until the Astrape study is completed,<sup>19</sup> the proposal is still misplaced. CalCCA agrees with the CAISO, SEIA, LSA, the Center for Energy Efficiency and Renewable Technologies (“CEERT”), SCE, and the CESA that it is reasonable to adopt a hybrid QC methodology in the RA proceeding

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<sup>17</sup> Hybrid WG Report at 5.

<sup>18</sup> *Administrative Law Judge’s Ruling on Energy Division’s Proposal*, Feb. 21, 2020, Appendix A (“Staff Track 2 Proposal”) at 9.

<sup>19</sup> Hybrid WG Report at 5.

although the ELCC study is underway in the RPS proceeding. While the study should inform future discussions of the hybrid QC, there is no reason to believe the study will result in a robust, permanent methodology without discussion and buy-in around the design, scope and methodology of the study and its applicability to the RA proceeding. Moreover, issues remain surrounding the study, rendering it too immature to support a permanent QC method.<sup>20</sup> CalCCA supports the development of a Technical Review Committee (“TRC”),<sup>21</sup> suggested by CEERT, to provide input and expertise from broader range of stakeholders.

Hybrid resources are prominent among a very limited set of resources viable for use in meeting the IRP Procurement Track compliance obligation, and, moreover, reducing the risk of near-term reliability challenges. Deferring the adoption of a permanent methodology during a time when new resource build for grid reliability and resilience is clearly necessary creates significant uncertainty and risk for LSEs seeking to develop hybrid resources for these purposes.

**B. Transition to a Marginal ELCC for Wind and Solar Resources, but Study Further Its Application to Battery Storage**

The ELCC Working Group explored, but did not reach consensus on, whether resources should receive an average or marginal ELCC for purposes of RA compliance.<sup>22</sup> CalCCA supports a marginal ELCC in principle.

SCE proposes a transition to a marginal ELCC approach “to provide market signals to properly value the procurement of resources.”<sup>23</sup> The proposal would grandfather existing RA

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<sup>20</sup> Hybrid WG Report at 14.

<sup>21</sup> Hybrid WG Report, Appendix D, CEERT Consensus Suggestions.

<sup>22</sup> *Southern California Edison Company, Calpine Corporation, and East Bay Community Energy’s Joint Report for the Track 2 Effective Load Carrying Capability Working Group* (“ELCC WG Report”), Mar. 11, 2020, Attachment 1 at 4.

<sup>23</sup> *Id.* at 3.

resources at the current average ELCC established by the Commission until retirement, while new resources would receive a marginal ELCC when they become operational.

CalCCA supports the adoption of counting methodologies that reduce the likelihood that current investments will be inappropriately devalued by future investments. Consequently, in concept, CalCCA supports marginal ELCC vintaging for wind and solar resources, which would protect investment value and safeguard resource valuation consistent with resource contributions. If a marginal ELCC were adopted, however, the Commission should set the future transition date with a long enough lead time that ongoing negotiations would not be adversely affected. CalCCA suggests application of marginal ELCCs for wind and solar resources with a COD after August 2023. In addition, marginal ELCC values may change between when project valuation occurs and COD. Assigning the marginal ELCC value at an earlier date- such as the date of interconnection agreement- would provide more certainty during contract negotiations and financing.

Application of a marginal ELCC to battery storage presents a more complicated set of issues, and CalCCA supports further study to develop a suitable methodology. However, the application of ELCC to storage (either average or marginal) is only one of several dimensions of uncertainty regarding the RA valuation for storage. Other uncertainties include how to properly account for different energy-capacity ratios (“duration”) of storage resources, how to mitigate stakeholder concerns regarding battery performance and degradation, and other issues. While these issues are being considered in other proceedings, such as the IRP<sup>24</sup>, the understanding of

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<sup>24</sup> R.16-02-007, Proposed Decision, *2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning*, Ordering Paragraph 7 at 81.



and regulatory structures around storage resources are not yet sufficiently mature to enable the same marginal ELCC transition that is suitable for solar and wind resources.

The IRP proceeding is guiding statewide planning and ultimately procurement, and the RA program should be aligned in terms of the methodologies and metrics used to evaluate reliability. The RA program can also gain insights from IRP modeling to inform more quantitatively how resources contribute to reduced LOLE.

### **C. Facilitate a Less Burdensome RA Valuation of Demand Response**

Demand response is an increasingly significant resource category given its role in facilitating investments in customer-sited resiliency resources. Because BTM resources today are not assigned RA value directly, they are limited to participation in RA markets as proxy DR resources or load modifying resources. Consequently, until a new pathway is established for BTM resources to participate in RA markets, refinement of DR counting rules is critical in facilitating the development and financing of customer-sited resiliency efforts.

CalCCA appreciates the Joint Parties' comprehensive proposal and supports the Joint Parties' principles that QC rules for third party DR resources should be transparent, administratively efficient, and objective.<sup>25</sup> As the Joint Parties point out, if these principles are achieved, "[c]ustomers will be better able to access the value of DR due to easier program participation, DRPs will benefit from reducing a significant barrier to participating in the RA market, and LSEs, including community choice aggregators ("CCAs"), will face less complexity in procuring third-party DR."<sup>26</sup>

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<sup>25</sup> *Track 2 Proposal of California Efficiency + Demand Management Council, Cpower, Enel X North America, Inc., and Leapfrog Power, Inc.*, Feb. 21, 2020 (Joint DR Track 2 Proposals), at 2.

<sup>26</sup> *Id.*

The Commission should also consider its requirements for DR valuation in light of enhanced need for local resiliency. Customer-sited battery storage is a critical element of resiliency strategies throughout the state. Since BTM battery storage, lacking an explicit RA value, will be valued as proxy DR, the rules for determining DR value should not administratively or financially burden the development of these resources. Load impact protocols, which today are used to develop DR QC values, “are highly time- and resource-intensive”<sup>27</sup> and will deter valuation and development. CalCCA thus support the Joint Parties’ efforts to develop less resource intensive alternatives to the LIPs.

**D. Modify QC Counting for Hydroelectric Resources, but Provide a Measured Response to the Resulting Reduction in RA Capacity Through the IRP Modeling Process**

The Hydro Counting Working Group (“Hydro WG”) proposes a new approach to valuing the reliability contribution of hydroelectric resources, recognizing that the current QC methodology “does not account for the operating constraints reflected in actual bidding and scheduling” of these resources.<sup>28</sup> The new methodology would derive QCs for these resources using historical availability, based on CAISO market data, which would result in de-rating their current QC values. CalCCA supports some de-rating of hydroelectric resources in light of limited hydro availability in certain months and under certain conditions but urges caution in response to these changes.

Hydroelectric resources represent approximately 15% (8,131 MW) of the CAISO NQC list. Consequently, their QC value has a significant impact on the stack of RA resources available to meet the state’s reliability needs. Recognizing that it will be difficult to perfectly

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<sup>27</sup> *Id.* at 5.

<sup>28</sup> *See Track 2 Proposals of Pacific Gas and Electric Company* (U 39 E) (“PG&E Track 2 Proposals”), Feb. 21, 2020, at 3.

predict the future availability of each of hydro resource, CalCCA urges a cautious, deliberative approach in both the development of the hydro QC methodology as well as the interpretation of its impacts – a 5% error in the new RA valuation could shift the perceived resource availability by 400 MW in either direction. While such an interpretation may be directionally correct, in light of the limited feasible precision of any RA hydro methodology, CalCCA urges the Commission to review and verify any implied system impacts through a more holistic system modeling exercise such as the Integrated Resource Plan, which can consider hourly, seasonal, and water-year variations with more granularity and sophistication prior than a QC methodology.

### **III. NEAR-TERM RA REFORM**

#### **A. Expand the Existing Local RA Waiver Process to System and Flexible RA**

CalCCA has proposed an expansion of the existing waiver process for local RA to include system and flexible RA compliance.<sup>29</sup> In system and flexible RA markets characterized by scarcity,<sup>30</sup> this proposal is consistent with the Commission’s long-standing commitment that it will “ensure that LSEs are not placed in a position whereby they would have to pay any price to acquire the capacity needed for their RA obligations.”<sup>31</sup>

CalCCA proposes that a waiver of system and flexible RA compliance obligations be granted if the LSE can demonstrate the following:

1. Supply was not available to the LSE at a commercially reasonable price before the compliance deadline.
2. The LSE has taken commercially reasonable actions to obtain system or flexible RA, as applicable, as demonstrated by:

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<sup>29</sup> See *California Community Choice Association’s Late-Filed Track 2 Proposal*, Mar. 18, 2020 (“CalCCA Track 2 Proposal”); see also R.17-09-020, *California Community Choice Association Petition for Modification of Decision 19-06-026*, Oct. 30, 2019.

<sup>30</sup> See CalCCA Track 2 Proposal at 4-7.

<sup>31</sup> D.05-10-042 at 66.

- a. Documented, robust efforts to procure system or flexible RA, as applicable, through bilateral contracts;
- b. Participation in multiple utility or third-party solicitations; and
- c. The LSE's issuance of an RFO for RA products before August 31 of the year preceding the compliance year.

Energy Division Staff will determine, as they do today with local RA waiver requests, whether an LSE has met these requirements. Additionally, a waiver need not be granted if there is insufficient capacity available in the system and the Commission or CAISO had clearly signaled a potential reliability shortfall to market participants three or more years prior.

As a part of the expanded waiver process, the Commission should adopt SCE's proposal for a limited waiver for providers of last resort ("POLR"). SCE proposes that a waiver be granted "for instances in which retail load is: (1) returned to the POLR with insufficient time to meet the RA requirement, or (2) not transferred from the POLR to another LSE as planned as a result of action or inaction by the LSE."<sup>32</sup> As SCE observes, this waiver will ensure that "the POLR and other LSEs and their customers are treated fairly and to mitigate the risk of unlawful cost shifting among their customers."<sup>33</sup>

**B. Adopt a Reasonable Alternative to Staff's Proposed Changes in Non-Compliance Penalties**

Staff proposes revisions to the existing compliance penalty structure, including creating seasonally differentiated penalties, incentives to cure Year Ahead deficiencies before Month Ahead filings, and a process to remove from the market LSEs who consistently fail to meet their RA requirements.<sup>34</sup> While understanding the drivers for Staff's proposals, CalCCA urges the

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<sup>32</sup> SCE Track 2 Proposals at 17.

<sup>33</sup> *Id.*

<sup>34</sup> Staff Track 2 Proposals at 23.

Commission to instead adopt reasonable alternatives. In most cases, LSEs are making commercially reasonable efforts to comply with their requirements but have been hampered by a tightening market and possibly the exercise of market power. In those cases, the more punitive penalty modifications will only increase costs to customers. If the Commission is concerned about LSEs that may not be taking commercially reasonable efforts to comply, a more direct approach is warranted.

An alternative approach can be implemented in two steps. First, the Commission should adopt the proposal for system and flexible RA waivers, proposed in Section III.B., which will distinguish between those LSEs making commercially reasonable efforts and those who are not. Second, the Commission should adopt escalating penalties only for LSEs who have not requested waivers or whose waiver requests have been repeatedly denied. Without the system and flexible waiver process, however, increased penalties will cast too wide a net, unnecessarily increasing customer costs for no good reason.

#### **1. Raising Penalties in Summer Months Does Not Address the Foundational Problem of a Tightening RA Market**

In its Track 2 proposal, Energy Division proposes to increase the current system RA penalty of \$6.66/kW-month in all twelve months to \$9.40/kW-month in the five summer months and \$4.70/kW-month in the non-summer months. This increase would affect all non-compliant LSEs, including those LSEs making commercially reasonable efforts to comply, since LSEs have recently only had deficiencies during the summer months. This approach unnecessarily penalizes LSEs that are making reasonable efforts to meet their compliance obligation but are unable to comply due to market conditions.

Market conditions are tightening, as discussed in Section III. B. and CalCCA's Track 2 Proposal. While LSEs under these conditions face a penalty if they do not procure sufficient RA,

there is currently no comparable incentive for sellers to make RA available to the market at a reasonable price in a timely manner. Consequently, a higher penalty on LSEs is not a productive solution to a tightening RA market. If anything, a higher penalty will likely enable suppliers to exercise even more market power, resulting in harm to ratepayers through both elevated RA prices and elevated penalties.

Even without higher penalties, high prices will continue to serve as a signal to LSEs that new capacity needs to be brought onto the system, and new builds will also continue to be incentivized in the IRP procurement track. However, pending deliveries from new builds, higher penalties will only result in LSEs paying higher prices for the existing capacity that is available today. The Commission has already acknowledged that LSEs should not be obligated to pay any price to fulfill their RA requirements.

## **2. Creating Month-Ahead Penalties Does Not Address the Foundational Problem of a Tightening RA Market**

Staff proposes to incentivize LSEs to fill deficiencies between the year-ahead and month-ahead Resource Adequacy filings, asking whether a separate month-ahead penalty would be appropriate. CCAs already work to fill deficiencies between their year-ahead and month-ahead filings, because they do not want to be subjected to the risk of a CAISO backstop and the associated cost. Although Energy Division Staff have argued that CAISO backstops have been rare, this remains a non-negligible risk that any prudent LSE should seek to avoid. Moreover, a month-ahead penalty, like other penalties, presents unique challenges in a tightening market, risking unnecessary increases in customer costs through penalties on LSEs making commercially reasonable efforts to comply.

If, despite these concerns, the Commission determines that a further incentive to fill deficiencies between the year-ahead and month-ahead filings is necessary, a separate month-

ahead penalty is not the appropriate way to achieve the Staff's stated objective. Instead, the Commission should choose to adopt a positive incentive for LSEs to fill deficiencies between the year-ahead and month-ahead filings. Specifically, LSEs who successfully fill deficiencies between their year-ahead and month-ahead filings should see a reduction in their year-ahead penalty. This would provide LSEs with a positive incentive to fill deficiencies between the year-ahead and month-ahead filings while avoiding unnecessary costs to ratepayers, and potential exacerbation of market power.

**3. Adopting a System and Flexible Waiver Process, Together with Escalating Penalties for Repeat Offenders, Will Encourage Greater Compliance Without Unnecessarily Increasing Costs**

As discussed in Section III.B., a system and flexible RA waiver process could serve as a foundation for the Commission's efforts to encourage greater RA compliance. This process will require all LSEs seeking a waiver to demonstrate their efforts to comply with system and flexible RA requirements or face penalties. In addition, the process will allow the Commission to distinguish between LSEs taking commercially reasonable efforts to comply and those that are not, and apply an escalating penalty structure limited only to these LSEs failing to take such efforts.

Staff proposed escalating the consequences for repeat offenders, explaining:

[S]taff believes it may be appropriate to institute a form of penalty escalation so that LSEs who consistently fail to procure sufficient capacity are not able to simply pay penalties, lean on other LSEs to actually procure the remaining needed capacity (particularly if there is no CPM designation from CAISO), and yet continue to operate in the RA program.<sup>35</sup>

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<sup>35</sup> Staff Proposal at 23.

CalCCA agrees, but it is critical to have a means of differentiating LSEs who make commercially reasonable efforts from those who do not. The Commission should implement escalating penalties only for LSEs who either repeatedly fail to demonstrate their reasonable commercial efforts through the waiver process or who fail even to seek a waiver. For example, after two failed waiver requests or two penalty payments without seeking a waiver, the penalty for noncompliance could be increased to 150 percent of the standard penalty, escalating over time.

This approach, combined with CalCCA's system and flexible penalty waiver process, best serves the interest of creating serious consequences for those LSEs who do not make commercially reasonable efforts. It would not, however, unnecessarily increase costs for customers of LSEs taking reasonable efforts to comply. Escalating penalties that do not take into account an LSE's commercially reasonable efforts to comply could enable sellers to exercise market power over those LSEs that they know are at risk of such penalties.

**C. Refine and Clarify the Maximum Cumulative Capacity Buckets Proposal Prior to Commission Action**

Staff's proposal on updating the Maximum Cumulative Capacity buckets seeks to address increasing reliance on use-limited resources within the RA program. CalCCA agrees that there is value in reforming the RA program to better align RA resources, both at the collective and LSE level, with the technical requirements of the bulk electric system. Further, CalCCA agrees that there is value in preventing LSEs from "leaning" on other LSEs or backstop mechanisms by failing to procure resources that contribute equitably to meeting peak and post-peak energy needs.



CalCCA generally supports the direction of the staff recommendation to adopt Option 4b as a near-term refinement towards achieving the aforementioned policy goals with two considerations.

First, Energy Division should provide further clarification on its resource categories and requirements. CalCCA understands the intent of the proposal as ensuring LSEs bring resources without significant energy limitations (*e.g.* battery storage) or dispatch frequency limitations (*e.g.* demand response), however, traditional RA resources may also face some use limitations which may not strictly comply with “unlimited availability.” Such limitations could include hydroelectric resources with flow or water availability limitations or natural gas resources with start/stop limitations, among others. CalCCA requests further clarification regarding this proposal prior to Commission action. Further, release of staff analysis and data as outlined in the proposal background would support more detailed stakeholder review and input.

Second, CalCCA notes that adopting this proposal in Track 2 may create some confusion in light of the discussion slated for Track 3, which CalCCA understands to include a more structural review and reconsideration of the RA program, much of which revolves around the increasing reliance on preferred resources for meeting reliability needs. In this context, CalCCA would support deferring action on the adoption of the MCC buckets proposal to Track 3 (or Track 4) as part of a broader suite of policy reforms intended to manage shifting reliability needs and shifting reliability resources.

#### **D. Align Commission and CAISO Showing Reports**

Staff proposes refinements to reporting system capacity when showing local or flexible capacity. Staff explains:

[I]n their RA Filings to Energy Division, (1) LSEs should report any flexible capacity as system capacity, as well, (2) LSEs should report the local and system capacity of any local resources they

show towards their compliance obligations, adjusting the local capacity accordingly based on how much system capacity is under contract in the given month, and (3) if the monthly NQC for a resource is 0 MW, the LSE should report the full August NQC value as the local capacity value for the resource if the LSE has the entire capacity of the resource under contract for the full year, or if not, the LSE should report 0 MW as the local capacity value in that month.<sup>36</sup>

CalCCA proposes that to eliminate reporting capacity clerical errors identified in proposal H of ED's proposals, the Commission should automate the percentage calculation for local resources in the filing for those resources with variable NQCs.

## **E. Multi-Year Forecasting**

### **1. Defer Consideration of PG&E's Multi-Year Forecasting Proposal**

PG&E proposes that the Commission adopt a multi-year load forecast requirement for all jurisdictional LSEs to be used for allocating local RA requirements.<sup>37</sup> PG&E contends that the current use of a single year's forecast for the three-year forward requirement is "likely to result in (1) cost shifting, (2) inequities in RA obligations that occur as load shifts from investor-owned utilities ("IOUs") such as PG&E to community choice aggregators ("CCAs"), and (3) potential over-procurement."<sup>38</sup> SDG&E likewise supports multi-year forecasting.<sup>39</sup>

CalCCA understands PG&E's concerns but is equally concerned regarding the potential accuracy of any three-year forecast in the face of material load migration. Moreover, it is unclear how the Energy Commission would resolve issues where the collective three-year load forecasts of individual LSEs did not total the collective requirement. For this reason, the

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<sup>36</sup> Staff Track 2 Proposals at 17-18.

<sup>37</sup> PG&E Track 2 Proposals at 5-6.

<sup>38</sup> *Id.* at 6.

<sup>39</sup> SDG&E Track 2 proposals at 3-4.

Commission should direct further workshops on whether and how PG&E's concerns could be addressed. Adopting the proposal in its current state will lead to confusion and greater complexity in the forecasting process.

## **2. Make Transparent the Methodology for Allocating Multi-Year Local RA Requirements**

CalCCA agrees with SDG&E that “accurately allocating multi-year local RA requirements to LSEs is essential.”<sup>40</sup> Many of the factors and dynamics of setting LSEs' Local RA obligations are not transparent to LSEs. Moving forward, the exact methodology, including assumptions and mechanics, should be made publicly available and noticed. Additionally, to the extent resources and costs are allocated to all LSEs, such as for Cost Allocation Mechanism and investor-owned utility DR resources, forecasted assumptions for LSEs' RA requirement (“RAR”) should be provided with as much specificity as possible to allow LSEs to forecast their own RAR more accurately.

## **F. Reject Changes to Planning Reserve Margin**

SDG&E asks the Commission to review the existing 15 percent planning reserve margin (“PRM”), which was adopted in D.04-01-050.<sup>41</sup> CalCCA urges the Commission to reject this approach. Numerous efforts are underway today that will lead to significant changes in the way capacity is counted, leading to a higher degree of certainty in resource value. The CAISO's RA Enhancements stakeholder process is considering changes that will lead to changes in counting for existing resources, including its Unforced Capacity proposal.<sup>42</sup> The Commission's own efforts in this track to refine QC counting will likewise enhance resource value certainty.

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<sup>40</sup> SDG&E Track 2 Proposal at 2-4.

<sup>41</sup> *Id.* at 1-2.

<sup>42</sup> [citation]

These incremental efforts toward securing reliability are much more critical and likely to be more effective than a bottom-up loss of load expectation (“LOLE”) study to assess the current PRM. Moreover, an LOLE study would be of limited use and would likely need to be repeated regularly for a grid that is dramatically evolving with changing technology. The Commission should reject SDG&E’s proposal.

#### **IV. CONCLUSION**

For the foregoing reasons, CalCCA requests adoption of the proposals advanced in these Track 2 comments.

Respectfully submitted,

CALIFORNIA COMMUNITY CHOICE  
ASSOCIATION

A handwritten signature in blue ink, appearing to read "Evelyn Kahl".

Evelyn Kahl  
General Counsel

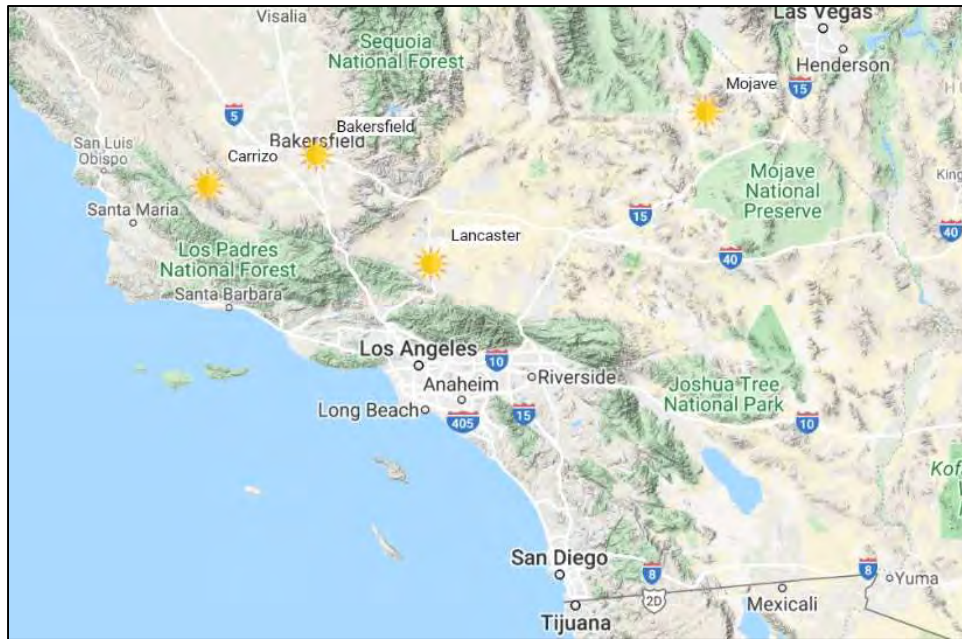
March 23, 2020

## APPENDIX – Methods For The Hybrid Resource Weather And Geography Analysis

The intent of this analysis is to understand the potential variability in solar energy availability for on-site charging of hybrid or colocated storage systems under various conditions. Specifically, the analysis intends to estimate the ability of a solar system to fully charge a paired storage system to a full state of charge prior to 4pm.

### Data Sources:

Sub-hourly solar radiation data come from the Department of Energy (DOE) National Renewable Energy Laboratory's (NREL) National Solar Radiation Database<sup>43</sup>. The data provide 30-minute measurements of solar radiation from 1998-2018. Four locations were selected in California to study: (1) Bakersfield, (2) Carrizo Plain, (3) Lancaster, and (4) the Mojave Desert. These locations were chosen as areas with significant solar resource availability and active solar development.



**Solar Resource Areas Included in Study**

### Methodology:

The study estimates solar resource availability using historical weather data to generate energy production profiles for the chosen locations. The study involves a number of assumptions, each of which intends to err towards a conservative estimate of energy availability.

1. The study assumes that every day the battery system is depleted by midnight the previous night.
2. Using the NREL data for ground-level solar availability (incorporating clouds), the model conservatively assumes 14% of the solar energy is captured and converted into electricity <sup>44</sup> with a 90% efficiency in charging the battery.
3. Daily energy generation profiles are developed for the 21 sample years.
4. Energy production is compared against energy necessary for charging to determine whether it is feasible to reach a full state of charge by 4pm and to what degree the solar resource is over- or under-producing sufficient charging energy. The model assumes no solar electricity is exported prior to 4pm.

#### Notes:

- To estimate the full model requires using the NREL data for ground-level solar radiation, which is called the Global Horizontal Irradiance (GHI), and a few conversion factors. The GHI is in Watts per square meter.
- To estimate energy generation requires using the GHI, an average system surface area of a panel (e.g. where an average 100W panel is 1 meter by 0.556 meters), and the above efficiency conversions.
- Estimating the energy generation coefficient (EGF) at time  $t$  and location  $i$  requires the following equation:

$$EGF_{it} \left( \frac{MW}{system\ W} \right) = GHI_{it} \left( \frac{W}{m^2} \right) \times \frac{1}{10^6} \left( \frac{MW}{W} \right) \times area \left( \frac{m^2}{system\ W} \right) \times Solar\ Conv. (14\%).$$

- Supposing a system size (e.g. 100 MW) and multiplying it by the energy generation factor, the time period (30 minutes), and the battery charging loss (BCL) rate before 4 p.m. results in the total generation of the system in day  $d$  before 4 p.m.,

$$Energy\ Generation_{id} \left( \frac{MW}{day} \right) = \sum_{t < 4\ p.m.} System\ Size\ (W) \times EGF_{it} \times \frac{1}{2} \left( \frac{hrs}{measurement} \right) \times BCL.$$

- Energy generation before 4 p.m. indicates whether there was enough solar radiation prior to 4 p.m. to fully charge the storage resource.
- Whether a full state of charge can occur is estimated simply by taking solar output and subtracting it from the energy capacity of the assumed empty battery.
- The model is set up to study a variety of hybrid resource configurations spanning a four-hour battery resource that ranges from 10% of the size of the photovoltaic installation to 100% - e.g. for the 10% case, a 1MW battery that has a capacity of 4MWh on a 10MW photovoltaic system.

<sup>44</sup> Clack, C. T. (2017). Modeling solar irradiance and solar PV power output to create a resource assessment using linear multiple multivariate regression. *Journal of Applied Meteorology and Climatology*, 56(1), 109-125.